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Item 6 of the provisional agenda**

LC/NAIROBI.

IMPROVEMENT OF MARKETING POLICIES AND PROGRAMMES WITH EMPHASIS ON AGRICULTURAL INPUTS, RURAL SAVINGS AND CREDIT FACILITIES FOR SMALL FARMERS AND LIVESTOCK PRODUCERS, PARTICULARLY WOMEN

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I. INTRODUCTION

1. The establishment of state, official co-operative and development authority input distribution and credit systems was the main action line of African Governments during the decades to 1980. Determining factors were the political preferences of national leaders, the desire of newly independent governments to be doing something new quickly, needs to mollify internal pressure groups, and sometimes lack of reliable information on the realities of system performance at the farm level.

2. External financing agencies have tended to back up these preferences for much the same reasons, and for administrative convenience. They need an "official" counterpart agency to which they could tie their aid or loan. International fellowships for training in marketing went mostly to government officials, rarely to sons of merchants who could build on practical experience. Aid resources were concentrated on government-sponsored enterprises and channels.

3. In the years following the commodity market depression of 1981 dissatisfaction with the incentive to food and other agricultural production provided under these systems and difficulties in meeting their cost sparked recognition of the need for change. With a strong lead from the international financing agencies the process of change has been substantial. Some 20 countries have accepted structural adjustment loans and the reform programmes tied in with them. These have included: (a) devaluation of currencies to realistic levels, in particular to make use of domestic resources from agriculture more attractive as compared with imports; (b) measures to reduce the burden on the government of loss-making parastatals and heavy subsidy programmes; (c) liberalization of agricultural marketing and input distribution systems to provide scope for competition in the expectation that this would lead to reductions in cost and the provision of new services.

4. The purpose of this paper is to examine the progress that has been achieved, identify innovatory experience and provide a frame for discussion on where to go next. Particular attention will be given to the benefits accruing to small farmers and livestock producers, particularly women. It will deal with policies and programmes in input supply and the provision of credit subject to the continuing constraints on the use of foreign exchange and government finance still prevailing in most African countries.

II. REVIEW AND ASSESSMENT OF POLICIES AND PROGRAMMES FOR AGRICULTURAL INPUT SUPPLY AND RURAL FINANCE

A. Agricultural inputs

5. Major inputs for agriculture in Africa, apart from labour and water are mineral fertilizers, good seed and agricultural chemicals needed to control pests and diseases. Fertilizer use was growing steadily in the 1970s from 1.5 million tons in 1975 to 2.3 million tons in 1980. After some recession it reached 2.8 million tons in 1985. It remains, however, very low - averaging 7.8 kg of N.P.K. nutrients per hectare in sub-Saharan Africa as a whole,

attaining 18.4 kg in Southern Africa (excluding the Republic of South Africa). 1/ The bulk of this may be attributed to use by fairly large commercial farmers and on export crops such as cocoa, coffee, cotton and tea. Use by small farmers and on food crops is in many African countries just beginning. Under the conditions prevailing in some parts of the region, intensive use of fertilizers may simply not be economic. This paper focuses on the distribution of fertilizer in Africa to the smaller farmers since its cost and convenient availability are major factors in influencing its use.

6. The organized distribution of seed became important for agricultural productivity in Africa with development of high yielding hybrids. Formerly farmers used seed retained from the previous year's crops. For growing hybrid maize, for example, they must obtain new supplies each year.

7. Chemical treatments have been developed to control specific crop diseases. These also have been proved economic in use under African conditions and constitute part of the standard input package of farmers seeking to obtain the most from their soil and labour. The supply of improved seeds and agro-chemicals will be treated here along with fertilizer.

8. Under the pressure of financial stringency and the recommendations of international financing agencies many African countries undertook to bring their exchange rates to realistic levels, reduce the subsidies paid to agriculturally related parastatals and liberalize farm input and output markets. The overall goal was to reduce the weight on the economy of state enterprises and bureaucracy and allow greater scope for competition and private initiative. Ideas about the relative roles of public and private sectors and about appropriate policies for governments and donor agencies have been at the centre of planning and advisory discussions in recent years.

9. Experience assembled through research studies sponsored by the World Bank was reviewed at a recent conference in Malawi. 2/ The prevailing theme was that most of the governments concerned are handicapped by a dearth of analysis based on hard empirical evidence of the performance of private, co-operative and parastatal enterprises under varying sets of conditions. Comparative analyses based on concrete case studies are only now becoming available. Until the early 1980s lack of reliable concrete information on performance at the ground level led to a general acceptance of public intervention to fix product prices, set up administratively-based co-operative structures, and establish monopoly marketing boards. More recently it has been responsible for the dismemberment of many of these vehicles of intervention with scant regard for

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1/ UNECA, Measures for improving credit facilities and fertilizer marketing in Africa at the level of the small farmer, Addis Ababa, 1987.

2/ Conference on Agricultural Growth and Market Town Development, jointly sponsored by USAID/Kenya and the Government of Malawi, Lilongwe, 16-19 May 1988.

their contributions to marketing and input distribution efficiency, and to the availability of enterprises able to operate adequately in their place. The consequences are especially serious where the alternative enterprises lack access to finance and market information and are too few to ensure competition, the farmers are too weak to undertake collective action on their own and their aversion to risk results in less than optimum production strategies.

10. Thus termination of the fertilizer subsidy in Senegal led to a sharp reduction in use, with the secondary effect of discouraging the entry of private enterprise into its distribution. Policies to modify subsidy programmes must be developed in full account of the price obtainable for the crops on which it will be used, the quality of the extension provided, the timeliness and reliability of supply and the availability of credit.

11. Normally a favourable price for the end product is a more efficient incentive for production than a subsidy on fertilizer or other specific inputs. It leaves to the farmer the opportunity to apply the combinations of inputs most economic for his particular circumstances. An unduly low price of fertilizer tends to induce a more than economic use of an input which for most African countries is a direct cost in foreign exchange. Table 1 illustrates the calculations involved in assessing the effect on farmers' net income in the Gambia from growing different crops of proposed changes in prices and fertilizer subsidy. Under the production coefficient assumed, the food crops remain attractive while ground-nuts become unprofitable. 3/

12. Policies on subsidies for fertilizer use will take into account both the degree of risk involved and the availability of practicable substitutes. The risks of wastage and financial loss in using fertilizers in drought-prone areas and with crops and conditions where it will be only marginally productive call for caution. In Sahelian and other countries where livestock are raised in association with crop production, organic manure is available to enhance soil productivity. Transport cost and availability factors limit its use. Onion growers in the Anloga lagoon area of Ghana are able to use fish scraps as fertilizers because fishing goes on nearby. Nitrogen fixation in the soil by legumes grown in rotation with other crops is another way of maintaining soil fertility.

13. The use made of parastatals, co-operatives and private enterprises for distributing fertilizer in African countries is summarized in table 2. Fertilizer procurement and distribution is entirely government controlled in 60 per cent of the countries. One quarter have mixed government and private systems. Just over 10 per cent have fully private systems. There are a number of countries such as Burkina Faso, Cameroon, the Gambia, Malawi, Senegal and Zambia, where private enterprises are projected or have been authorized, but have not yet succeeded in establishing for themselves a significant role.

3/ The Gambia, Ministry of Agriculture, Fertilizer subsector paper: Marketing and Price Policy Analysis, Banjul, January 1987.

Table 1. Returns from applying fertilizer in the Gambia before and after price and subsidy changes

Crops	Cost of applying 50 kg of recommended fertilizer			Increase in crop of production due to 50 kg of fertilizer application	Gross revenue			Net revenue		
	Before price changes	After price changes	Under zero subsidy		Before price changes	After price changes	Under zero subsidy	Before price changes	After price changes	Under zero subsidy
	Dalasis			Kg	Dalasis			Dalasis		
Ground-nut	26	35	57	52	35	42	42	9	7	-15
Millet	31	55	70	272	226	407	407	195	352	337
Maize	32	55	71	96	68	119	119	36	64	48

Source: The Gambia, Ministry of Agriculture, Fertilizer subsector paper: Marketing and Price Policy Analysis, Banjul, January 1987.

Table 2. Fertilizer distribution systems in African countries

Country	Government agencies	Co-operatives	Private sector
Angola	DINAMA		
Benin	National, regional development cos.		Private dealers
Botswana	BAMB, Ministry of Agriculture	Co-operatives (retail)	Projects (retail)
Burkina Faso	SOFITEX, Organisme régional de Développement (ORD)		
	Direction des entrants agricoles		
Cameroon	Ministry of Agriculture	Co-operatives (crop-related)	
Central African Republic	SOCADA (for cotton) Government agencies		
Cape Verde	Fomento Agropecuario		
Ethiopia	AISCO Ministry of Agriculture's Marketing Centres		
Gambia	GPMB	Gambia Co-operative Union	
Ghana	Ministry of Agriculture, Regional projects		
Guinea	AGRIMA		
Guinea-Bissau	Ministry of Rural Development		
Côte d'Ivoire	Government (integrated with crop marketing)		
Kenya		Grain Growers Co-operative Union, coffee co-operatives	Wholesalers, estates retail stockists
Lesotho	Co-op Lesotho		Optichem
Liberia	UPMC, Agricultural Development Projects	Co-operative societies	Rubber concessionaires
Madagascar	Crop Parastatals Extension Agencies		Optichem (estates)
Malawi	ADMARC (small-scale sector) smallholder fertilizer revolving fund	Co-operative federation	Private dealers
Mauritius			
Mozambique	Empresa Boror Distribuidora		

Table 2. Fertilizer distribution systems in African countries (continued)

Country	Government agencies	Co-operatives	Private sector
Niger	Union nigérienne de crédit et de coopération. Direction de la production agricole		
Nigeria	Ministry of Agriculture. State Agencies		Some private dealers
Senegal		Crop-producer societies (cotton, maize)	Private role in future
Sierra Leone	Ministry of Agriculture and National Resources		
Somalia	Agricultural Development Corporation		Estates
Sudan	Government marketing boards, sugar corporations (integrated with crop marketing), Agricultural Bank		
Swaziland		Central Co-operative Union	Private manufacturers; private retail stockists
United Republic of Tanzania	Tanzania Fertilizer Company	Co-operatives	
Togo	Government input service		
Uganda			Importers, distributors
Zaire	Programme national des engrais		
Zambia	NAMBOARD	Provincial Co-operative Marketing Unions (retail)	
Zimbabwe		Co-operatives	Windmill, ZFC, Agritrade, retail, ... stockists

Source: FAO, Crisis of sustainability: inputs supply and incentive policies. Rome, 1985, with author's modifications.

14. The four countries where there has been input distribution by competing private enterprises for some years (Kenya, Mauritius, Swaziland and Zimbabwe) are the four leading sub-Saharan countries in per hectare fertilizer consumption. These systems are based on the principle of freedom to set up commercial ventures and consumer freedom to choose whichever supplier offers the best service at the lowest price. The prices are, therefore, the real market prices. In Kenya, for example, producers can import pesticides and agro-chemical products directly, which means that local suppliers have to remain competitive with the world market.

15. It should be understood, however that the relationship is not directly causal, but one of interaction. Prices for agricultural products relative to those of fertilizer have been favourable to its use. Transport and credit availability and other factors have also had a positive role. An expanding market provided scope and incentive for competing enterprises. Competition then keeps down costs and provides more services, thus stimulating consumption.

16. The most striking new development in input distribution as a result of liberalization has occurred during the last years in Zimbabwe. Until then purchases of inputs on Agricultural Finance Corporation (AFC) credit in the communal farming areas were channelled through the co-operative system. The main lines of competition were direct sales by the fertilizer companies to savings groups that accumulated funds over a period of months in order to pay cash. The companies employed field men to advise farmers on fertilizer use, arrange for soil tests to determine the fertilization needed, and act as a link between the groups and the company in arranging for direct deliveries by truck load and subsequent pick up by group members. Improved seed and agricultural chemicals were available through the co-operatives and at private retail stores.

17. The new development when farmers became free to choose their supplier on AFC credit was the assembly of packs of balanced lots of fertilizers, agro-chemicals and seed as recommended by extension advisers and financed by AFC. These were assembled and transported directly to producing areas to be picked up by farmers whose orders had been grouped into convenient loads for transport. The company agent's role was set up to do this by an employee of the co-operative sales producer and marketed seed. He had noted the inconvenience to farmers of having to make separate journeys to obtain fertilizer, seed and pesticides.

18. A typical pack is 50 kg Compound D, 50 kg ammonium nitrate, 20 kg hybrid maize seed and 2 kg pesticide. Sales are arranged by 10 field representatives equipped with motor cycles and paid a basic salary plus an incentive allowance geared sharply to quantity sold. Sales expanded to 20,000 tons in four years. The founder of this enterprise had, he was told by one of his staff, a gift for making a complicated operation seem simple. The cost of inputs to farmers supplied through this channel is substantially below the transport costs plus 15 per cent mark-up applied by the co-operatives.

19. This may constitute an inputs delivery model for consideration in many other parts of Africa. Plans to promote the distribution of inputs in Malawi

through traders who are encouraged to play a larger part in produce-marketing could include adoption of this approach. Their primary input function would then be to organize direct deliveries to groups of farmers rather than to hold stocks. These are collected by hand and give a good return on the space taken up. Supplies for small farmers who have not met their need through group orders would be available at a more limited number of points and at a higher price to cover their costs.

20. An area of concern arising in a number of World Bank studies of countries pursuing structural adjustment policies is the renewed interest of their governments in co-operatives. This interest in some countries from a reluctance for ethnic reasons to [illegible] the recommendations of donor agencies for liberalization. Elsewhere [illegible] enterprises licensed to trade in agricultural produce [illegible] Asian enterprises are confined to urban business. Past experience in [illegible] with monopoly co-operative structures has been [illegible] that when co-operative systems are assigned a monopoly of marketing or input distribution, this can become directly prejudicial [illegible] Co-operatives have done well in Kenya, notably [illegible] their access to essential processing facilities [illegible] of any other countries. Their politicization [illegible] Republic of Tanzania led to abrupt suppression [illegible] by government action rather than as an integral [illegible] co-operative procedures and controls to prevent [illegible] an effective mechanism for input distribution and the promotion of new technologies.

21. Even so, experience in a wide range of agricultural economies has shown that in their absence the margins taken by private enterprise tend to increase. Co-operatives are needed as a competitive channel but not as a monopoly. Arrangements whereby they can be established as such without a full monopoly merit careful consideration. In Kenya for many years 40 to 50 per cent of the fertilizer available for distribution has been allocated to the co-operative federations with the balance not taken up going to private channels. Government policy in Kenya has been to protect a large part of fertilizer imports to the Kenya Farmers' Association and the [illegible] the rest goes to other enterprises. In Zimbabwe the co-operatives [illegible] are criticized by the farmers' organization for delays and poor service. Their competition on their share of the market has fallen sharply. It is legal however, to maintain their viability by assigning them a [illegible] role as purchasing agents for the Grain Marketing Board.

22. To meet the needs of farmers not served by crop marketing organizations, group delivery systems and co-operatives, in order to provide an alternative supply source, locally based small scale retailers offer the lowest cost solution in many rural areas. They can combine the sale of fertilizers with local crop assembly and the distribution of other agrochemicals and basic consumption necessities. For moving goods to and from market centres they can use a small

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1/ Conference on Agricultural Growth and Market Town Development, op.cit.

truck to the fullest advantage. It can also provide a public carrier service - a regular link for people and produce between outlying villages and local centres on the day of the periodic market.

23. A position now favoured in some African countries is to maintain a pre-existing government or parastatal operation and allow private enterprise to come in as well. Maximum prices and margins are still fixed by the government. Often they do not make adequate allowance for financing, risk and other costs. Where input distribution has been undertaken by government departments, important cost elements were never included in official price calculations. So it is difficult to convince the government of the need for adequate margins in trade channels. A parastatal may be subsidized directly, or have its losses made up by the government, or simply carry them forward on its books obtaining new finance with government guarantee. Private enterprises in this situation have to go out of business. Where they are new and unproven in fertilizer operation and competition is weak, there may be a case for keeping a parastatal as a competing channel. The degree to which it is subsidized should then not be such as to discourage private enterprises from applying the resources needed to provide effective competition, and so benefit the farming community.

24. There is an argument, in principle, for a single organization to procure fertilizer for small countries that are importers. It would be in a better position than a number of small independent importers to mobilize finance, take advantage of savings on large orders, bulk shipments, etc., and bargain over prices. Such an organization will also constitute a convenient mechanism for pooling prices paid for fertilizer from different sources, including international aid, and for applying subsidies if these are available. It would then resell from its depots at standard prices, by type and time period, to competing domestic distributors. This is the system adopted a few years ago in Bangladesh.

25. It can also be used to facilitate competition in distribution of fertilizer within a pan-territorial structure of maximum resale prices. Thus the central import managing agency can deliver fertilizer to designated regional centres of distribution equalizing the transport costs from the port by means of a subsidy designated for this purpose. It can also achieve the same result by paying transport subsidy allowances to independent distributors, co-operatives or private, on certification by an appropriate body - if this is feasible under local conditions - that they have transported a specified quantity of fertilizer to this point. This system has been used in India for many years. In general, pan-territorial pricing is uneconomic because it promotes agricultural production that is wasteful of transport resources. If for local political reasons a government feels obliged to pursue it, then the procedure set out above may be the least harmful in implementation.

26. The staff of such an importing organization should be the best available and be given opportunities to take advantage of refresher training programmes and study tours to other countries. While they may purchase through a reputed international broker, it is important that they be fully informed of world market trends and prices. They will need access to continuing information sources such as 'Green Markets' (Washington) and the new periodical issued

by British Sulphur. In this regard, the Fertilizer Advisory Development and Information Network for Africa proposed by FAO and ECA would be an invaluable source of such market information on fertilizer, a fact which underscores the need for sustained efforts to see through its establishment.

27. The potential advantages of such a central import managing agency can easily be negated, however, by bureaucratic procedures and failure to respond in a timely way to farmers' various requirements. Crop production and marketing integrators, and large producer groups, may find it advantageous to make their own imports, as in Kenya and various other countries.

28. Similar problems arise with monopoly state seed companies. Competition via imports is usually needed to speed up access to advantageous new strains, etc. The Monopoly Seed Company in Côte d'Ivoire was replaced by an enterprise with domestic individual and international participation. A monopoly over the supply of ground-nut seed in the Gambia was used by the co-operative assembly agency to keep hold of 70 to 80 per cent of the ground-nut marketing though its costs were double those of private traders.

29. Effective in expanding supplies of hybrid maize and other seeds to meet the needs of expanding use by small farmers have been the Kenya Seed Company and Seed Corporation in Zimbabwe. The former was capitalized by the former Kenya Farmers' Association together with the Government and used the KFA network of wholesale and retail depots and stockists for distribution. Seed Coop is a co-operative of some 20 large farmers. Distribution is through co-operative and private wholesalers and retailers. The Government has plans for an alternative source of supply drawn from farms operated by the Agricultural and Rural Development Authority. Farmers have complained in Zimbabwe of late arrival of new seed at the retail level. This was attributed to delay in government authorization of price increases under inflation.

30. The cost of fertilizer to the farmer is a continuing constraint on its use in many African countries. This begins with the cost of local production or of imports. Farmers in the United Republic of Tanzania suffer from having to buy from a high-cost domestic source. Plants in Cameroon and Côte d'Ivoire were closed because they could not produce economically. A plant erected in Somalia has already been termed a 'cathedral in the desert'. The highest landed costs, however must pursue long routes through other countries, also obliging importers to incur the costs of holding stocks many months in advance of the season of use, to be sure that they are available when needed.

31. Marketing costs from point of import or local production are also high in most African countries (See table 3 for a comparison between illustrative African and Asian countries). Except for Zimbabwe with its good road structure and competitive distribution system, costs in the African countries are much higher than in Asia. That there is scope for economies is demonstrated by an FAO study in Zambia which identified potential annual savings approaching $US 10 million.

32. Table 4 presents more detailed figures for a larger number of African countries. The situation they reflect may not be fully representative and the figures - converted from local currencies at official exchange rates -

Table 3. Fertilizer distribution costs and margins in African and Asian countries, 1983-1985 (in US dollars per ton)

Country	Total	Transport	Storage	Interest	Distributor margin	Other
Kenya	133	38	6	20	31	38
Nigeria	137	90	-	-	21	26
Sudan	166	63	5	1	64	33
Zambia	149	80	5	15	15	34
Zimbabwe						
Large farmers	27	11	-	1	12	4
Small farmers	54	20	-	-	34	4
India	28	15	1	2	2	8
Indonesia	27	10	1	4	9	3
Thailand	63	8	4	2	15	34
Korea	77	16	7	43	10	1

Source: FAO. Representative data assembled on a continuing basis by rapporteurs who have participated in training seminars.

certainly do not constitute a reliable base for inter-country comparison. Some are incomplete because certain cost elements have been absorbed by the enterprises responsible without identification. They do serve, however, to show the scale of costs involved in the movement of fertilizer from port or manufacturers to farmers in the major area of use in the country concerned. They still do not include the costs incurred by the farmer in moving the fertilizer to the place where it will be applied. Several visits may be needed to a government or co-operative outlet to put in an order and make a purchase. Transport may have to be hired to bring 50-kg bags to a distant farm.

33. The c.i.f. on landed price is a crucial figure. Not only is it usually the major element in the cost for the farmer, but it is also the base for financing charges within the country pending final sale, and for handlers' margins charged as a percentage mark up. The Gambia and the Sudan acquired urea at around the f.o.b. price ex-Near Eastern ports at that time at $US 100 per ton. The starting prices in Somalia, the United Republic of Tanzania and Zambia were more than double that. These are attributed to high cost domestic manufacture, or alternatively, higher than world market prices applied to fertilizer actually received free under an aid programme.

34. The transport costs reported reflect broadly the distances to be covered, e.g., low relatively in the Gambia, a very small country. In terms of cost per ton/km they were exceptionally high in the United Republic of Tanzania and very low in Zaire where river transport was used. However, physical losses

Table 4. Fertilizer distribution costs and margins in detail for African Countries, 1985

	East and Southern Africa				North-East Africa		Central Africa		West Africa		
	Madagascar	Tanzania	Zambia	Zimbabwe	Somalia	Sudan	Rwanda	Zaire f/	Burkina Faso	Gambia	Ghana
Import (c.i.f.) or ex-factory price	210 a/	240 a/	255 a/	164 b/	215 b/	138 a/	252 a/	241 a/	315 b/	100 a/	103 a/
(For land-locked countries only: Marketing costs to the border)	-		75			-	173	-	27	-	-
Transport costs	56	124	47	20	17	46	41	44	41	11	42
Storage costs	5	2	8		6	8	59	17	...	6	4
Handling costs	10	14	7	4	7	9	2	1	6	4	15
Physical losses	6	2	4	2	10	5	19	22	-	7	3
Taxes and levies	1	-	-		1	46	5	15	20	-	-
Interest costs	9	37	5	2	-		79	-		6	18
Promotional expenses	-	-	...	-			-	1	-	1	-
Other costs	14	3	4	7	1	1	3	1	-	12	2
Importers'/wholesalers' margin	10	39	-	13	11 d/	56	36	6	10	40	14
Retail margin	13	25	17	30	-	e/	24	e/	-	30	9

Table 4. Fertilizer distribution costs and margins, in detail for African Countries, 1985 (Continued)

	East and Southern Africa				North-East Africa		Central Africa		West Africa		
	Madagascar	Tanzania	Zambia	Zimbabwe	Somalia	Sudan	Rwanda	Zaire f/	Burkina Faso	Gambia	Ghana
Total Marketing Costs	124	246	167	78	57	165	441	107	104 h/	117	107
total cost	334	486 c/	422	242	272	303	693	348	422	217	210
Retail price	286	Variable	243	242	239	303	489	348	296	202	109
Subsidy	48	-	179	-	33	-	204	-	126	15	101

Source: Shepherd, A. and R. Coster, Fertilizer Marketing Costs in Developing Countries, FAO/FIAG, Rome, 1987.

Notes: - = nil; ... = negligible.

a/ Import (c.i.f.) price.

b/ Ex-factory price.

c/ An additional charge of $US 49.00 is made on imported fertilizer to support high production costs of TFC.

d/ All fertilizer in Somalia is distributed on an ad hoc basis by FAO and other projects which absorb some costs. The margin quoted is nominal.

e/ Included in wholesale margin.

f/ Average of all imports.

g/ Ex-factory Abidjan, Côte d'Ivoire.

h/ Probably understates true costs, which are absorbed by the cotton marketing organization, SOFITEX.

amounting to over nine per cent by volume were reported by the Promotion nationale des engrais in Zaire. In five of the countries the fertilizer was held in storage domestically for more than 300 days resulting in very high storage and financing costs - where these were recognized as in Rwanda. In the case of land-locked countries distant from a port, acquiring stocks well in advance of when they are needed may be a necessary precaution against interruption in supply. In other countries with direct sea access, lack of financial autonomy, delays in authorizations of foreign exchange, etc., meant that fertilizer arrivals were often quite unrelated to the season of use. 5/

35. Critical requirements for efficient distribution of inputs are:

(a) Timely access to supplies on the part of distributors;

(b) Pricing procedures that cover essential costs and provide some incentive for performance;

(c) Access to finance at each stage in the channel through to the user;

(d) Suitable transport access and availability of vehicles and supplies;

(e) Timely ordering of supplies to avoid late deliveries and ease peak seasonal demands for transport.

36. All of these tend to become problem issues under the financial and other constraints of many African countries. Optichem (Malawi) Ltd., the private enterprise supplier of fertilizer to the plantation sector, considers government assistance in the construction of roads and stores/selling points, and priority attention by the Central Bank to its letters of credit for imports, as major factors pre-conditional for success. 6/ There have been times, however, when no fertilizers were available to the small farming sector in Malawi because import supply lines were interrupted or the parastatal supplier lacked the necessary funds.

37. Maximum sales prices and fixed margins set by governments to protect farmers against overcharging, can cause losses to distributors if their financing or storage costs are high. This can occur when they are obliged to take into stocks supplies that cannot be sold until the following season, because of late delivery or the onset of rains making rural roads impassable. The unforeseen arrival of an aid shipment can leave distributors who have made commercial imports with stocks unsold. Inability to obtain credit locally could oblige an importer to obtain high cost credit from an exporter. In mid-1988 the enterprise distributing balanced packs of fertilizers, chemicals and

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5/ UNECA, Agricultural credit and the mobilization of resources in rural areas, Addis Ababa, 1986.

6/ United Nations Economic Commission for Africa, Measures for improving credit facilities and fertilizer marketing in Africa at the level of the small farmer, Addis Ababa, 1987.

seeds in Zimbabwe had one third of its vehicles off the road for lack of spare parts. Discounts on advance orders were available there from the fertilizer companies in Zimbabwe, but lack of liquidity in the co-operatives and the high cost to them of finance left them unable to take up such offers.

38. How to distribute fertilizers in units convenient for small-scale users has been a question occupying fertilizer distribution in Africa for some time. The conventional 50-kg sack is difficult to carry and may be more than the small farmer needs which exacerbates the financing problem. These disadvantages have been recognized, but they do not counterbalance the saving in cost over packaging in smaller quantities. In Karatina (Kenya) local retailers break open sacks and sell by kilogram to vegetable growers needing small quantities at various time during the year. Distribution of standard fertilizers in 25- and 10-kg sacks is now common practice in Malawi.

39. Incentive payments to the staff of fertilizer distribution enterprises are almost essential. This is a product that must reach farmers on time. The enterprise combining fertilizer, seed and agro-chemical distribution in Zimbabwe paid its field organizers of group purchases remuneration on a level paralleling that received by a government deputy secretary. The advantages of sending out full truck loads justified this. Putting the higher unit margins earned on seed and chemcials together with the lower one on fertilizer made it possible to pay such salaries and still deliver the balanced pack to farmers at less cost than was possible through conventional wholesale and retailer agency channels.

40. Governments are subject to a wide range of often competing pressures. The existence of a fertilizer advisory committee to draw attention to action requirements in due time and to devise solutions to problems as they arise, can be very helpful. Many governments have already set up such committees. Participation of farm and trade representatives is important if they are to take full account of the realities of distribution and use under the prevailing conditions.

B. Credit

41. Characteristics of the last two decades in Africa has been a top-down approach to rural finance. The objective has been to improve the availability of agricultural credit services to small-scale farmers. The main policy instrument employed to attain this goal has been the creation of government-owned agricultural credit banks. These were specifically intended to provide cheap credit to small-scale farmers. They were financed mainly from external aid programmes, and were targeted at specific farmer groups applying fixed, subsidized interest rates. Another policy instrument was the integration of agricultural credit into rural development projects. These also attracted wide ranging donor support during the 1970s. In this case a development authority assumed the functions of a credit agency lending to project beneficiaries who pursued designated production and marketing programmes. Neither of these mechanisms contributed significantly to the building of viable

rural financial institutions. 7/ They had no independent source of funds; they faced recurrent liquidity crises. Maintenance of the area development organization often became a drain on public funds. Periodical donor refunding was essential if the agricultural banks were to keep lending.

42. Commercial banks have made efforts to contribute to rural finance, particularly in areas of cash crops production as with the cocoa growers in Ghana. In total, however, their role has been minimal; their operations could not be adequately oriented to rural development.

43. In spite of the efforts made, it is estimated that formal financial institutions have not reached more than 10 per cent of African farmers. The majority of small-scale farmers have still to depend upon the informal financial market. A basic problem has been the tendency to see credit as an independent input rather than as a claim on resources and services, and without much regard to its sustainability. It has been seen as a key instrument in rural development. Yet in many situations the obstacles to development were low product prices, lack of appropriate technological packages, lack of marketing including input services and infrastructure. These were obstacles that could not be overcome by the provision of short-term agricultural credit. In the 1980s the international financing agencies came to recognize that no matter how much money was pumped into agriculture, production would not increase without pricing policies that allowed farmers to make a profit. Thus lack of a clear identification of the problem involved in rural development has been a major constraint in developing effective agricultural finance programmes.

44. A standing question mark has to be put against a financial institution that is concentrated on seasonal lending to agriculture. To operate effectively it needs a network of branches or agencies permitting direct contact with clients that are commonly low in density and spread over wide areas of territory. Yet the demand for services is highly seasonal. There is no other remunerative operation to contribute towards overhead costs of a branch structure. This tends to result in loans being made at a distance along standardized lines with inadequate individual appraisal. If loans are not repaid on time such a bank is badly placed to pursue collection. It cannot put extension officers into this role since their advisory contacts with farmers would then be prejudiced.

45. In some cases loan repayment has been below 50 per cent. Such situations may be deemed to reflect a serious lack of financial discipline as well as inadequate loan appraisal in relation to cropping results. Yet to deny farmers further access to credit until their loans are repaid can itself be

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7/ Mittendorf, H.J., The top-down approach to the development of rural financial institutions in Africa, internal paper, World Bank, Washington, D.C., 1988.

counterproductive. Climatic conditions may be good the following year: without credit to acquire the inputs needed, they will not be able to take full advantage of it - to the direct disadvantage of the national economy as well as the immediate partners in finance.

46. Farmer participation in an agricultural banking operation as depositors as well as borrowers could be helpful. Some funds for lending could be generated locally. Prospects for this are best where there are compensating demands for services, i.e., deposits coming in from the proceeds of coffee sales at a time when other farmers might be borrowing to buy fertilizers. It is also felt that if to obtain a loan a farmer must also have some money of his own on deposit, it will improve his attitude towards repayment; he will be concerned about the viability of the bank, not regard it only as a source of cheap government credit or of aid funds to be tapped. Co-operative banks operate on these lines as in Kenya.

47. Co-operative banks in many other African countries place little or no emphasis on financing the co-operative societies and their small farmer members for whom they have been set up ostensibly to provide financial facilities at relatively cheaper costs. Many have functioned in the same rigid and conservative manner as the commercial banks and like most development banks, their operations have been greatly constrained by poor management, inadequate loan portfolios, high operating costs and difficulties of loan recovery.

48. A further handicap for many agricultural banks has been that they were obliged, as government banks, to finance all types of development projects which the bank was unable to appraise or to reject. Often agricultural banks were forced by government to finance government-operated marketing schemes which were not viable, because the government insisted upon a price policy which did not provide an adequate margin to cover the cost. With government ownership and policies followed, and funding by government decision, there is little incentive for bank management and personnel to improve performance. These banks tend to be bureaucratic in procedure, with a high degree of centralization, a heavy top-down approach and frequent changes of management for political reasons. 8/ Management information services in these banks tend to be neglected. FAO has pressed for central bank supervision and inspection but this has a long way to go in many countries if it is to be effective. In practice small farmers have great difficulties in obtaining loans from many of these banks, ostensibly set up in their interest. The loans of the Agricultural Bank in the Sudan go mainly to mechanized farming operations. To obtain credit from the Fonds national de développement rural (FONADER) in Cameroon means overcoming many administrative obstacles. Ninety-four per cent of the loans to agriculture by the Agricultural and Industrial Bank of Ethiopia went to state farms, not to the peasant sector which still has the bulk of the land. Specialized agricultural credit institutions in African countries are listed in table 5.

8/ Mittendorff, ibid.

Table 5. Specialized agricultural credit and banking institutions in African countries

Country	Institution
Algeria	Banque de l'agriculture et du développement rural
Benin	Caisse nationale de crédit agricole
Botswana	National Development Bank
Burkina Faso	Caisse nationale de crédit agricole
Burundi	Banque nationale de développement économique
Cameroon	Fonds national de développement rural (FONADER)
Central African Rep.	Banque de crédit agricole et de développement
Comoros	Société de crédit pour le développement
Congo	Caisse nationale de crédit agricole
Côte d'Ivoire	Banque national de développement agricole
Ethiopia	Agricultural and Industrial Development Bank
Gabon	Caisse nationale de crédit rural
Gambia	Gambia Agricultural Development Bank
Ghana	Rural banks Agricultural Development Bank Ghana Co-operative Bank
Guinea	Banque nationale de développement agricole
Kenya	Agricultural Finance Corporation
Lesotho	Lesotho Agricultural Development Bank
Liberia	Agricultural and Co-operative Development Bank
Madagascar	Banque nationale malgache de développement
Mali	Banque nationale de développement agricole
Mauritius	Mauritius Co-operative Central Bank
Morocco	Caisse nationale de crédit agricole
Niger	Caisse nationale de crédit agricole

Table 5. Specialized agricultural credit and banking institutions in African countries (continued)

Country	Institution
Nigeria	Nigerian Agricultural Central Bank
Rwanda	Banque rwandaise de développement;
	Union de banques populaires
Senegal	Caisse nationale de crédit agricole
Somalia	Commercial and Savings Bank, Somali Development Bank
Sudan	Agricultural Bank of Sudan
Swaziland	Swaziland Development and Savings Bank
Togo	Caisse nationale de crédit agricole
Tunisia	Banque nationale de Tunisie
Uganda	Co-operative Bank
United Republic of Tanzania	Tanzania Co-operative and Development Bank
Zaire	Banque de crédit agricole
Zambia	Agricultural Finance Corporation;
	Agricultural Development Bank;
	Financial Services of Zambia Co-operative Federation
Zimbabwe	Agricultural Finance Corporation

Source: UNECA, Based on field surveys, African agriculture: the next 25 years; annex V; and FAO; Inputs Supply and Incentive Policies, Rome, 1986, p.17.

49. The greatest handicap of all, however, for these banks has been government insistence that the interest charged be kept low. Often this has been insufficient to cover the current rate of inflation, let alone the administrative overhead and transaction costs of the bank. Table 6 presents estimates of the real rates of interest in a number of countries. Out of 17 countries, 11 had negative real rates of interest on agricultural loans. The implications of unduly low interest charges have been stressed repeatedly:

(a) Loans have to be rationed, tending to go to the most influential applicants;

(b) The reduced interest costs are significant only to the large-scale commercial farmer and he tends to get most of the money; a survey of villagers in Nigeria ranked low interest charges on loans fifth on a list of positive attributes of institutional credit;

(c) In no way can the bank build up its capital on the basis of savings;

(d) Unable to cover losses on bad debts and its own operating costs the bank will need subsidy and capital replenishment indefinitely; and

(e) Reliance for this on central bank funds, the government budget and international aid swells budget deficits and exacerbates international debt burdens.

50. Reluctance to act on these considerations is not confined to political leaders looking for popularity in the short run. They are set aside also by international financing agencies under pressure to fulfil country targets in lending.

51. With funds available to favoured institutions at less than cost, and restrictions imposed on interest charges for lending, there is little incentive for private enterprise to develop rural financial services. In Ghana, for example, intending to encourage agriculture the government set the lending rate to agriculture at 13 per cent. At the very same time government stock yielded 19.5 per cent. With this alternative how could commercial banks be expected to lend to agriculture with its risks and supervisory costs?

52. Where, however, agriculture is profitable and autonomy in operations is not inhibited, commercial banks can make a substantial contribution. Table 7 providing data on the shares of agriculture and trade in commercial bank loan portfolios points up some contrasts. In the Gambia, Malawi and Swaziland, agricultural lending amounts to over 30 per cent of their total portfolios; in many other countries this proportion is less than 10 per cent.

53. It has been customary to belay the commercial banks in Africa for not contributing more to development. The reality, it has been pointed out, is that there is ample capital in the commercial banks seeking viable lending projects. This was confirmed by direct contacts with commercial banks in Malawi in 1988, though it was attributed by the banks to lack of foreign exchange to match the internal demand for loans to invest in transport and other equipment available only via imports.

Table 6. Agricultural loan rates, inflation rates and real rates of interest, illustrative African countries

Country	Year	Average nominal interest rate for agricultural loans	Rate of inflation a/	Real rate of interest
Botswana	1983	16.0-16.5	10.3	5.7 - 6.2
Egypt*	1983	11.0-13.0	16.1	-5.1 - -3.1
Ethiopia	1984	9.0- 9.5	-7.5 b/	16.1 - 16.6
Gambia*	1984	9.0-19.0	10.4 b/	-1.4 - 8.6
Kenya	1984	14.0	11.5 b/	2.5
Lesotho	1984	12.0	17.3 b/	-5.3
liberia	1984	12.0	2.8 b/	9.2
Malawi*	1984	10.0-20.0	15.4 b/	-5.4 - 4.6
Mauritius	1981	8.5-13.0	13.9	-5.4 - 0.9
Nigeria	1984	6.0- 7.0	11.7 b/	-5.7 - -4.7
Swaziland	1984	12.0-21.0	11.6 b/	0.4 - 9.4
Tunisia	1982	6.0	13.7	-7.7
Uganda*	1984	24.0	75.0 b/	-51.0
United Republic of Tanzania	1980	7.5	30.2	-22.7
Zaire	1982	30.2	37.2	-7.2
Zambia	1980	12.5	11.7	0.8
Zimbabwe	1984	13.0	23.1	-10.1

Source: UNECA, Agricultural credit and the mobilization of resources in rural areas, Addis Ababa, 1986.

* Rates charged by commercial banks.

a/ Survey of Economic and Social Conditions in Africa, 1980-1984.

b/ 1983 rate.

Table 7. Agriculture and trade shares of commercial bank lending in African countries

Country	Period	Agricultural credit in total loan portfolio of commercial banks (% shares)	Agricultural credit average annual compound growth rates	Domestic and foreign trade in total loan portfolio of commercial banks (% shares)	Domestic and foreign trade credit average annual compound growth rates
Benin	1982-84	24.5	4.5	46.7	-1.5
Botswana	1982-84	10.0	-2.6	27.3	41.0
Burkina Faso	1982-84	9.0	26.9	57.5	-2.44
Côte d'Ivoire	1982-84	6.7	2.4	54.2	257.2
Egypt	1983-84	2.3	43.0	43.0	22.5
Ethiopia	1980-84	4.3	-1.3	56.0	-2.3
Gabon	1979-83	6.4	15.1	31.5	14.8
Gambia	1973-84	47.5	7.7	22.2	23.4
Ghana	1973-83	12.5	45.5	25.6	28.8
Kenya	1973-84	15.4	20.3	21.5	15.9
Lesotho	1980-85	1.1	5.0	53.5	19.0
Liberia	1980-84	7.4	-25.9	28.2	-11.3
Libya	1973-77	2.3	78.2	25.9	25.8
Malawi	1973-84	40.5	33.9	19.1	3.7
Mali	1984	13.4	-	39.3	-
Mauritius	1973-81	21.4	20.9	19.2	9.7
Niger	1982-84	10.2	37.3	58.2	4.9
Nigeria	1973-82	5.1	49.0	23.2	24.0
Senegal	1982-84	3.6	1.3	78.5	-14.5
Sierra Leone	1973-84	2.9	65.9	52.4	16.9
Somalia	1973-80	17.6	24.7	58.7	10.4
Swaziland	1973-84	31.5	10.8	13.9	12.6
Togo	1982-84	6.0	1.4	65.4	-2.25
Tunisia	1973-82	8.4	22.4	17.6	21.1
Uganda	1980-84	35.8	-2.35	34.0	62.0
United Republic of Tanzania	1973-82	4.2	11.2	63.9	11.5
Zambia	1973-83	7.5	22.6	17.2	9.9
Zimbabwe	1973-84	14.0	10.1	18.3	8.2

Source: UNECA, Agricultural credit and the mobilization of resources in rural areas, Addis Ababa, 1986.

54. Nevertheless, if agriculture were profitable the commercial banks could do much more towards financing its credit needs. Adoption of a village, on the lines pursued in India, could be a government policy for the commercial banks, backed up by incentives - central bank discounting of loans and reduced taxes and pressures - obligations to commit a designated proportion of their portfolio to village-based lending. A combination of tax allowances and an obligation to commit 15 per cent of the total portfolio to agriculture was used in Nigeria to induce banks to set up branches in "unbanked villages". Though the percentage of commercial bank lending to agriculture in Zambia is low, the commercial banks are the main source in fact. They lend through specialized institutions under government guarantee.

C. Loan repayment through marketing

55. In Africa the most efficient managers of credit for inputs to agriculture are enterprises that buy specialized produce for processing - cotton ginning and marketing companies, tea processors, fruit and vegetable canners, breweries and rice mills as in Mali. These organizations supply fertilizer, seed, other inputs, and technical advice to the farmers producing for them under a production/marketing contract. Supply is on credit; repayment is deducted from the proceeds of sale of the crop. This system works well with crops that need specialized attention to meet the quality and timing requirements of the processor, and for which alternative market outlets are impracticable or disadvantageous; so the borrower is linked by mutual interest to the processor who supplies the credit.

56. Requiring borrowers to sign a stop order that will be implemented by a marketing organization has enabled some agricultural banks to benefit from the same procedure. This is an established practice with the Agricultural Finance Corporation in Zimbabwe where all sales outside the communal farming areas of controlled produce including maize, oilseeds and cotton must be to the Grain or Cotton Marketing Boards. There is some side marketing to avoid credit deductions, particularly in years of low yields, but the system is considered a success. Burdensome, however, for the Grain Board is the accounting involved with over 400,000 farmers to check for outstanding stop orders. AFC and the Board would like to delegate lending and collection of repayments to local co-operatives, but there are doubts as to how many could take on this responsibility.

57. In African countries food crops marketing is normally much more dispersed with the participation of large numbers of separate enterprises. Concentration for the purpose of implementing credit repayment would be impracticable. In Zimbabwe also, more grain purchasing and milling in the communal areas to reduce transport costs and develop local growth points is foreseen for the future.

58. In the past, many African Governments have shied away from the private trader financing mechanism for a combination of reasons - political ideology, ethnic considerations, and reports of local exploitation. Yet they know that institutional credit reaches only a minority of farmers, and the larger ones at that. The others depend on informal sources of finance - family first, then the local trader. Complaints come in about the rate of interest charged

in such transactions, but nothing is done to make credit more easily available to small traders so that they can pass it on at lower cost to the producers with whom they deal.

59. Many donor agencies have been difficult over this too. They would prefer that loans go directly to farmers and shut their eyes to the fact that existing institutional mechanisms cannot reach a lot of them. Moreover, if this could be done by establishing an intensive network of local agencies - the cost would most probably exceed substantially the additional interest charged by a locally-based private trader. He benefits from the internal economies of input distribution, credit provision and output marketing against which repayment can be secured, all combined under one management with detailed local knowledge.

D. Rural finance and savings mobilization: Some innovative approaches

60. There are a number of countries where new ideas about rural finance are being tried out. 9/ Most of these pursue a bottom-up approach focusing on savings mobilization, a demand-led finance policy and viability of the institution.

61. An obvious step is to make the accumulation of savings in existing institutions more attractive. In addition to offering a positive rate of interest, earnings on savings deposits can be exempted from income tax up to certain limits. Such limits have been raised in Mauritius, Swaziland and Zambia. The opening of additional commercial bank branches brought in a lot of new money in Ethiopia. Savings are encouraged in Ghana by requiring that each borrower from a rural bank has on deposit one cedi for each 20 cedis of loan.

62. The Government of Rwanda, a densely populated and low-income country has developed a network of rural co-operative savings and credit banks with Swiss technical assistance. In the course of the last 13 years nearly 100 autonomous rural banks have been established; their operations are based on their own savings and credit schemes.

63. In Kenya and in the western part of Cameroon, co-operative financing systems have developed with Nordic and Canadian technical assistance respectively. These have given high priority to mobilization of savings, prudent lending and institutional viability. Payment of the proceeds of coffee sales directly into farmers' accounts with the co-operatives led to the accumulation of large sums in Kenya.

64. Mobile banks in Ghana, Swaziland and Zimbabwe arrive in rural market centres on appointed days. They cash Cocoa Board and Grain Board cheques for farmers and invite them to leave part of the money in the bank as savings.

65. In Zimbabwe, more than 3,000 informal savings clubs have been developed in rural areas with the support of non-government aid organizations such as

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9/ Mittendorf, ibid.

Silveira House. The saving club movement has become an important catalytic force at grass-root level in the promotion of effective farmer groupings. In addition to promoting savings they constitute convenient farmer groups for extension. They also order agricultural inputs as a group, which results in considerable savings in cost.

66. In Malawi, group responsibility for repayment of agricultural input loans has proved quite successful. Repayments average 95 per cent. This is attributed to powerful social pressure for repayment. This can be so strong that group members with a low harvest are obliged to sell grain they cannot spare and seek paid work in order to be able to buy it back later in the year. Group membership is determined at the village level. Financial discipline is backed by high moral leadership at the summit of government.

67. This group responsibility system is facilitated by a security fund. Borrowers pay into it 10 per cent of their loan. If there is a default it is made up by drawing on this security fund. Membership of such groups amounted to only 25 per cent of the Malawi farmer population in 1986. Emulation, however, of a successful minority may prove in the long run a more solid lead in rural financial development than 'soft' lending to please a large number.

68. In many African countries informal rotating savings and credit associations have expanded their operations particularly where the rural financial system has been in a crisis. They have proved viable, flexible in their operations and responsive to new requirements. With their built-in strength and social control it would be advantageous if they could be more closely linked to the formal financial system, without giving up their autonomy.

69. Independent private bankers have also expanded their financial intermediation activities in competition with formal institutions. They have shown capacity to respond to new opportunities if government rural financial policies leave them an incentive.

E. Services for livestock and milk producers

70. Access to credit facilities can be important for livestock producers where they need to pay for medical supplies and veterinary treatments and controls, to purchase supplementary feed or pay for access to protected grazing and water supplies. They are crucially important where animals must be purchased to pull draught implements and transport vehicles, and to maintain herds for commercial production of milk and high-quality meat.

71. To protect and raise the productivity of the very considerable traditional livestock resources of Africa requires vigorous measures to:

(a) Control and eradicate animal trypanosomiasis, rinderpest, tick-borne and other diseases;

(b) Strengthen production and improve the availability of vaccines and other medicaments.

72. Overshadowing, in many countries, the attainment of these goals are budgetary problems associated with the establishment and maintenance of laboratory and field veterinary services and the provision of transport and of pharmaceutical and biological supplies. In Zimbabwe where export of high-quality meat to EEC markets brings in $6 00 million annually in foreign exchange, the Government is expanding its services, establishing 200 animal management and health centres throughout the country. Where the public benefit is less conspicuous and centrally managed resources more scarce, governments may have to shift some of the burden of costs onto the livestock producers themselves.

73. Some relief to the continuing financial burden on governments may derive from the encouragement of private veterinary services, particularly in areas of relatively intensive milk production, where livestock are used for draught purposes, and in integrated crop and livestock production. There are some 14,000 veterinarians in Africa. Nearly all are government employees. Part of this veterinary manpower could be placed at the disposal of local communities where their services would be paid for on an individual or group basis. It has also been suggested that family members of migrant livestock owners should undergo periodic basic training in livestock management and disease control. They would be expected to pay for their supplies and equipment. Ability to obtain these on credit against eventual returns from marketing their stock would be a critical element in facilitating such developments.

74. At present many traditional livestock raisers provide credit. In Somalia, it is common for them to put stock in the hands of a trader who will pay them in cash and in kind when the animals have been shipped to Saudi Arabian markets and he has the proceeds in hand. This is a continuing arrangement between people with mutual confidence founded on religious and social ties. Accounts are settled seasonally at established meeting places. These settlements following such meetings could also constitute the base for provision of credit for veterinary services and supplies that must be paid for in cash.

75. Institutional credit for livestock owners is normally available where the stock can be identified easily, are tied to a specific location, and the scale of operation is substantial. Indeed, in Southern Africa cattle have often been acceptable collateral for credit provided for a range of uses. It is easier in practice to attach cattle in repayment of a debt, if necessary, than to foreclose on land. In the case of small-scale livestock owners the costs of supervision are high and the risks of disease losses, for example, still higher. In India, small-scale milk producers have long been financed to acquire animals, supplementary feed and pay for medical treatment by the dairy man who distributed their milk. Mutual dependence on a continuing outlet and continuing supply constituted the security. Dairy co-operatives on the Anand model are now taking on a growing share of this market and in provision of the services associated with it. Competing marketing and credit services along these lines are likely to be the best recourse for meat stock and dairy producers in much of Africa also.

76. Projects to establish holding and feeding ground where cattle can gain condition pending slaughter for meat have been tried in several countries. The animals held on the feeding lot constitute a base for institutional credit

directly from a financing agency or via a slaughtering enterprise. Success has been limited. Animals adapted to extensive range conditions gain insufficient quality to repay the cost of a period of specialized feeding. There is also the risk of disease transmission. The system established in Swaziland has endured, but the credit facilities are used mainly by government people who have acquired the animals from the original producers.

F. Women

77. In most parts of Africa women have a major role in agricultural production. Generally they are expected to produce food crops for family use, also surpluses for sale, while the men concentrate on cash crops and livestock. Often they contribute much of the labour for cash cropping also - 27 per cent of the work input for ground-nuts, 55 per cent for maize, 56 per cent for cotton in communal area farms in Zimbabwe, for example. In countries such as Lesotho where most of the men are away employed in mines, women do the bulk of the farming. Because the land, however, is in the name of the husband and they have limited access to cash, they often have difficulty in obtaining credit, sometimes also in obtaining use of transport for marketing. Because of long-standing male predominance in mixed group activities, commonly they have little to say in decision-making by co-operatives. It is in protest against this male predominance that women's group savings and input purchase activities have proliferated in Southern Africa, outside the co-operative system. In recognition of the need to ensure that women have a hearing in co-operative decision-making, the Central Agricultural Co-operative Union of Zimbabwe has resolved that member co-operatives should reserve two places on their committees for women. The Ministry of Community Development, Co-operatives and Women's Affairs organizes special support services for women including training, finance and technical inputs.

78. The substantial savings achieved by many women's groups from very low cash income bases are also a reaction to sexual oppression and insecurity. Women often save not because they can afford it, but as the only possible way of protecting their income from an undesired take-over by other family members; if there is a passbook it may be deposited with the savings group or credit co-operative to protect it from discovery.

79. The shallot economy of Anloga in Ghana is an example of the intensive agriculture that is needed in many parts of Africa if it is to feed its rapidly expanding population, and of the part in it that can be taken by women. These shallots are grown on beds developed by applying sand to marshy lagoon soils. Several crops are taken annually involving intensive labour inputs in hoeing, watering, fertilizer application and rebuilding the beds after heavy rain. While the plots are owned by men in reflection of the prevailing land inheritance pattern, the bulk of the work is done by women. They form groups called companies headed by a woman "boss" (boxu) who suspervises and negotiates for work. Basically these companies are formed according to the relative proximity of the members' households. They usually contract out to farmers living in the same area. Until a few years ago, women agricultural workers received a wage disproportionately low to that received by men. The bosses came together from all across the community, and decided that they would henceforth refuse

to work for less than the pay received by men. The farmers had to comply. They knew that the women needed cash since many of their own wives contributed substantially to the household and were responsible for school fees for their children.

80. The women also compensated for lack of access to land by taking control of marketing; the wealthiest acted as wholesalers; they financed others who assembled produce from the farms. To avoid glutting the market it was arranged that produce from different areas would be brought in for sale on different days. Originally the substantial credit needed for seed, fertilizers and wages came from the family and friends, and as a last resort private money lenders charging up to 50 per cent interest. In 1971 the Anloga farmers formed a co-operative to take advantage of low interest funds from the Agricultural Development Bank. This failed. A second co-operative, with a good local manager successfully operated a truck transporting members' produce to Accra. One third of its members were women farmers who rented land sometimes employing their husbands. Production loans go to members directly from the Ghana Commercial Bank based on the number of beds cultivated. 10/

81. In various parts of Africa women participate directly in input marketing in competition with men. They sell fertilizer in small quantities from retail stores in Kenya. In Lesotho they have built stores of 10 to 15 tons capacity on their farms to take in a full truck load of fertilizer. This is then re-sold on a 10 per cent commission basis. Some co-operatives handling seed and fertilizers in Swaziland are managed by women. They buy inputs collectively for their vegetable plots in villages in the Gambia. In Nigeria and Ghana they supply inputs on credit to farmers who contract in return to sell their output through them. 11/

82. In the long run it would be preferable everywhere to integrate women into the main line of rural commercial and institutional development. For this to be practicable they must be allowed to have full control of their assets and the product of their work.

G. Research and extension

83. A critical input for agriculture is sound advice on the production practices likely to be most remunerative for the farmer. Experience has shown that it must be based on research that is specific to the crop and to the soil, climate and other conditions of a particular farming operation. The recommendations of many traditional extension advisers tend to be general and to take insufficient account of risk from inadequate rainfall, etc.

10/ Patten, S.E. and Nukunya, G.K., "Organizational responses to agricultural intensification in Anloga, Ghana", The African Status Review, vol. 25, No.2, June 1982.

11/ FAO, Promotion of women's activities in marketing and credit, Rome, 1984.

84. The great advantage of the production and marketing contract offered by processing enterprises to secure their supplies of raw material is that the recommendations to the farmer are specific, based both on experience elsewhere and trials in the supply area, and on the regular provision of credit and the requisite package of inputs. While the cotton support and marketing system in Cameroon, may be paternalistic with a considerable expatriate presence, its performance exceeds that in various other countries. Yields of 1,300 kg per hectare are higher, likewise lint quality. Producers have benefited from a highly integrated delivery system including high-quality research and extension, timely arrival of inputs, and stability. In particular the continuing expatriate link brought in consistent managerial expertise and valuable international contracts in research and marketing.

85. While constrained to economies elsewhere, the Government of Côte d'Ivoire has maintained extension support to its agriculture at recent levels. In areas where the returns to extension are less evident it has been questioned whether the existing staff can be maintained. This is especially pertinent where they are immobilized by transport and fuel shortages.

86. Extension recommendations to farmers in dry areas remain handicapped by lack of viable research-based recommendations. Progress in developing risk-averting varieties and cropping patterns is slow. Indeed, it has been said that by the time these become available the bulk of the farmers on marginal lands may well have left them for more rewarding activities.

III. POLICIES AND PROGRAMMES FOR IMPROVEMENT OF INPUT SUPPLY, RURAL SAVINGS AND CREDIT

A. Assurances of a favourable operational environment

87. The main requirements for this are well known: a realistic exchange rate, fiscal and price incentives for both exports and the production of domestic food supplies, availability of foreign exchange for transport and processing equipment, supplies and spare parts, and incentive consumer goods for rural populations, confidence that enterprises can continue to operate without abrupt changes in policy, arbitrary controls and harassment by local officials. Evidence of the impact of such policies is the recent expansion of agricultural production for export and to meet domestic food requirements in Ghana. This was stimulated by high black market prices with only limited supplies on sale at official prices. Renewed availability of consumer goods has been a major factor in the revival of agricultural production in the United Republic of Tanzania. Many African Governments concerned to placate politically powerful urban consumers have kept food prices artificially low. This made the use of fertilizers to grow food crops unprofitable, hence the need for large subsidies. Hardship for low-income urban consumers resulting from a higher general level of food grain prices can be alleviated by the distribution of specific quantities of food at lower prices through special channels.

88. If competition is to be effective in the provision of inputs for agriculture, the rural infrastructure must permit the free movement of vehicles

and the flow of information on alternative sources. Basic features of an infrastructure for competitive marketing are:

(a) Transport and storage means;

(b) Communication facilities;

(c) Institutions to provide market intelligence and advice, and ensure satisfactory conditions for trade.

89. There has been a tendency in Africa to assume that provision and maintenance of such facilities are a responsibility of government - central or local. Such attitudes were promoted by paternal regimes and backed up by recognition at the popular level that official bodies were possessors of superior technology as well as of public funds. Under conditions of financial stringency a policy of confining government responsibilities to essentials and hiving off to local beneficiaries maintenance work within their technical capacity seems in place. Thus in Zaire, the co-operation of produce buyers and other regular road users has been obtained in maintaining agreed sections of public highways. They are entrusted with the management of the World Food Programme's "food for work" and associated cash wage components.

90. Strengthening rural market networks to bring competing consumer good and input supply, and output purchasing enterprises nearer to small farmers has been shown an effective stimulator of production for sale and of interest in inputs that will achieve this. Small farmers benefit from this because they are the ones most handicapped by having to travel long distances to find outlets and obtain supplies.

91. Most programmes for structural adjustment feature a positive interest rate policy with the objective of mobilizing private saving and improving its allocation. Prior to its launching an economic recovery programme in 1983 the inflation rate in Ghana reached 123 per cent. Interest rates on savings deposits were still kept at 11 per cent. Interest rates have been liberalized in the Gambia and Sierra Leone where they had also been negative in real terms. In Burundi and Mauritania there is now a more flexible management of administered rates.

92. An overall shift in the role of government is envisaged. Instead of trying to provide all public facilities and control their use in detail, it promotes and assists their provision by local initiative and contributions.

B. Priorities for action

93. A comprehensive and integrated approach to input delivery systems for small farmers is needed. This would be helped by independent reviews of their performance, aimed at improving both the system as a whole and its individual components. In general, a flexible and pragmatic approach seems desirable for sharing the burden of delivery systems between the public and private sectors. Input supply should be decentralized at local and area levels, and reliance for local co-ordination placed as far as possible on the small farmers themselves and the enterprises serving them.

94. Adequate provision must be made for the recurrent costs of input and credit systems, and resources assured for maintaining and running them. Spare parts should be as readily obtainable as the equipment for which they are required.

95. If the key problem of incentives could be solved, many of the other problems of delivery systems would begin to take care of themselves, and governments would then be better able to concentrate their activities on other essential areas. It is necessary to make a careful examination of the impact on producers' incentives of all relevant government measures. The dilemma of providing incentive prices for producers and at the same time, food cheap enough for poor consumers has to be considered carefully in each country in terms of the numbers whose welfare is actually at risk and how best it can be protected. More attention has also to be given in many places to the availability of consumer goods for the rural population if there is to be sufficient incentive to produce more. Roads and other transport facilities require regular maintenance, and suitable vehicles (and fuel and spare parts for them) must be made available if the whole delivery system is not to be paralysed.

96. In certain essential input supplies, particularly improved seeds and imported fertilizers and fuel and spare parts for mechanical equipment, there are physical shortages to be overcome in many African countries. Seed industry development should be a major priority everywhere. All forms of mechanization have to be supported by an effective infrastructure for maintenance and repair. In general, the distribution of a variety of agricultural inputs can usefully be combined with that of consumer goods, thus reducing costs and facilitating the penetration of remote areas.

97. Specific issues that merit further consideration in regard to input distribution are:

(a) Whether the despatch to rural areas of the balanced quantities of fertilizers, seed and pesticides, ordered by farmers on a group basis constitutes a model for wider use in Africa;

(b) Ways of keeping co-operative systems in business as a competing channel without giving them a monopoly;

(c) Arrangements whereby a parastatal assures the supplying of fertilizers to the main regional centres in countries where long distances are involved. From these points distribution is left open to competing enterprises on equal terms;

(d) Implementation, where not already in being, of a fertilizer advisory committee with commercial and farmer representatives; and

(e) The objective analysis of input distribution and credit systems with open consideration of possible alternatives.

98. Credit has to be approached in ways that pay more regard to its potential longer-term advantages. More realistic rates of interest for institutional loans are required to cover costs, encourage the quicker repayment of such

loans and attract local savings. While it is advisable to allocate institutional credit as far as possible in line with ability to use it profitably and repay it promptly, simplified procedures and other measures are needed for formal credit institutions to serve more small farmers.

99. At the same time full scope may be allowed for the development and expansion of credit and savings services originating from group and individual initiatives. For these to flourish they must be left free of bureaucratic controls. The channelling of finance and associated inputs to farmers through marketing and processing enterprises may also be encouraged where farmers are ready to accept it. Funds for this normally originate from a commercial bank. In some countries funds for marketing, including the purchase and distribution of fertilizers, are restricted by governments with other priorities.

100. Viable technological packages are essential for successful extension. The gap between research and extension must be reduced to make them more widely available.

101. Veterinary and other services to livestock raisers and users must be maintained and strengthened in many areas. The development locally of group and individual enterprises to provide needed services on a self-supporting basis can be promoted. Enterprises preparing and distributing livestock feeds, stocking medical supplies and also equipped to diagnose and treat common animal sickness, if necessary on credit, can be foreseen. This may ease some transport access problems and permit a smaller centrally supported veterinary service to occupy more of a supervisory role.

102. The critical requirement for women in many parts of Africa is that they be relieved of discriminatory handicaps, at least in access to official services. Meeting the food needs of Africa in the future may depend on their ability to expand and intensify their cultivation and to obtain inputs on credit to do so.

C. International assistance

103. International development circles have their own dilemma over external financing of credit to agriculture. They recognize the need for positive rates of interest and the mobilization of domestic savings, if national financing agencies are to be established on a sound footing. At the same time current credit needs of agriculture must be met if output is to be maintained. The empty coffers of the agricultural credit institutions have to be replenished; 'explicit debt forgiveness' for seasonal credit parastatals in years of drought is appearing in the literature. The counterview is that capital aid should focus more on medium- and longer-term lending, consciously leaving an expanding demand for short-term credit to be met through domestic savings.

104. The best course for African Governments may be to seek aid in converting their agricultural credit funds into multi-purpose rural banks, and in maintaining interest rates that will facilitate this process and at the same time favour the growth of autonomous rural financing institutions.

105. Increased aid in kind - fertilizers, pesticides, transport vehicles and spare parts should always be acceptable, provided it is adapted to the country's requirements, realistic prices are maintained, and it does not cause confusion and complicate maintenance because of an excess of brand names and models. Enterprises distributing fertilizers in countries receiving substantial shipments as aid stress the need for close co-ordination with commercial imports and release onto the domestic wholesale market on comparable terms. Some governments feel that they must accept it when offered. Deferment of shipments until a later date in order not to undermine the sale of other imports already committed, is recommended.

106. The dearth of reliable information on the performance of input supply systems through to the farmer could be eased by acceptance of external offers to undertake surveys. Local personnel should participate and replace outside consultants, wherever practicable so as to build up analytical capacity as a domestic resource. From such studies should come both indications for policy changes and for improved support programmes, and procedural frames for monitoring and evaluation subsequently.

107. Assistance in strengthening the supervisory capability of the central bank in relation to agricultural credit should be helpful in many countries. The aid agency concerned should be equipped to take into account the socio-cultural and policy environment of the recipient country and the needs and attitudes of its rural population.

108. Participation in the African Regional Agricultural Credit Association opens the way to useful exchanges of experience with qualified personnel from other countries with similar conditions and problems.